Attorney's Docket No.: 09857-027001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Richard G. Ketchum et al.   Art Unit : 3624
Serial No. : 09/401,872   Examiner : Narayanswamy Subramanian
Filed : September 23, 1999
Title : MONTAGE FOR AUTOMATED MARKET SYSTEM

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BRIEF ON APPEAL

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Real Party In Interest

The real party in interest in the above application is The Nasdaq Stock Market, Inc., a corporation existing by virtue of laws of the State of Delaware.

Related Appeals and Interferences

The appellant is not aware of any appeals or interferences related to the above-identified patent application.

Status of Claims

This is an appeal from the decision of the Primary Examiner in an office action dated May 9, 2003, finally rejecting claims 1-24, all of the claims in the above application. Claims 25-49 were subjected to a restriction under 35 U.S.C. § 121 and withdrawn from further consideration. Claims 50-67 were added in the reply to office action dated September 16, 2003. The examiner did not enter these new claims.

Claims 1, 4-6, 10, 16-17, 19, and 24 were rejected under 35 U.S.C. § 102 (e) as anticipated by Korhammer et al., U.S. Patent 6,278,982(Korhammer). Claims 2, 3, 7-9, 11, 14, 15, 18, 20, and 21 were rejected under 35 U.S.C. § 103 (a) as being obvious over Korhammer in view of Gutterman et al., U.S. Patent 5,297,031 (Gutterman). Claims 12, 13, 22, and 23 were rejected under 35 U.S.C. 103(a), as being obvious over Korhammer et al. in view of Gutterman et al. and further in view of Martyn et al. U.S. Patent No. 6, 195,647 (Martyn). Appellant filed a Notice of Appeal on September 16, 2003.

Status of Amendments

Appellant filed a reply pursuant to 37 C.F.R. 1.116(a) on September 16, 2003. Appellant also filed a Notice of Appeal on September 16, 2003. Appellant received an Advisory Action dated November 13, 2002. In the Advisory Action, the Examiner did not enter the proposed amendments of the September 16, 2003 reply. The examiner indicated that the proposed amendments to claims 1, 2, 10 and 11 and cancellation of claims 25-49 would be entered if submitted in a separate amendment.

Appellant is filing an amendment pursuant to 37 C.F.R. 1.116 (b) along with this brief to have the examiner enter amendments to claims 1, 2, 10 and 11 and cancel claims 25-49.

Summary of the Invention

Background

This invention relates to trading systems particularly financial trading systems.

Electronic equity markets, such as The Nasdaq Stock Market® collect, aggregate and display pre-trade information to market participants. In The Nasdaq Stock Market, for example, this pre-trade information takes the form of a quote. One interface presentation in the Nasdaq trading system commonly called the Nasdaq Workstation II® includes an interface having a dynamic quote window and a montage. The montage shows for a particular stock two columns (one for bid, one for ask), under which is listed by market maker identification (MMIDs) corresponding quotes with price and size information adjacent the MMID. *(Appellant's specification page 1, lines 3-30).*

Appellant's Invention

Appellant provides a trading process including an aggregation montage for the display of trading interest that shows the best bid/best offer in the market (the inside market) as well as aggregated trading interest that is multiple price levels away from the inside market. The aggregation montage also displays the aggregate size at each price level of the "displayed" trading interest of market makers, electronic communication networks ("ECN"), and UTP Exchanges and so forth. (Appellant's specification on page 3, lines 7-13).

The aggregation montage enables Quoting Market Participants to display their quotes anonymously at the price levels in the aggregation montage, thus, encouraging display of greater trading interest. Embodiments include the aggregation montage disposed adjacent a current quote montage; in which bid and ask quotations along with the participant's unique market maker identification symbol ("MMID") are displayed in price/time priority. (Appellant's specification on page 3, lines 14-20).

A feature of appellant's invention is an electronic market system for trading of securities. The electronic market system includes a plurality of client stations for entering quotes for

securities, and a server process that receives quotes from the clients stations, aggregates the quotes and causes a total of all aggregated quotes to be displayed for each of a plurality of price levels on the client systems and causes a current quote window to be displayed on the client systems in proximity to the aggregated quotes. (Appellant's specification on page 2, lines 19-25).

Another aspect of appellant's invention is a graphical user interface for an electronic market for trading products. The graphical user interface includes an aggregate window having a first plurality of indicators that displays totals of aggregated interest of a second plurality of market participants that exists in the electronic market at each of a third plurality of price levels of a product traded in the market and a current quote window disposed adjacent the aggregate window. (Appellant's specification on page 2, lines 26-30).

Another aspect of appellant's invention is a method of operating an electronic market for trading products. The method includes aggregating non-attributable interest in the product to provide a total of all non-attributable interest at a plurality of price levels. (Appellant's specification on page 3, lines 1-4).

Another aspect of appellant's invention is a computer program product for use in trading a product residing on a computer readable media comprising instructions for causing a computer to aggregate non-attributable interest in the product to provide a total of all non-attributable interest at a plurality of price levels.

References to the Specification

FIG. 1 shows an electronic market 10 that includes client systems 12 that access a central quote/order collector facility 20. The quote/order collector facility 25 collects pre-trade information in the form of quotes or orders. Entering quotes are limited to registered market makers 12b and ECNs 12c and possible UTP Exchanges 12d. (Appellant's specification page 4 line 14 to page 5 lines 9-29.)

In FIG. 3A, the order collector process 25 receives orders/quotes Quotes/orders are designated as either attributable or non-attributable. The order collector process 25 aggregates all of a Quoting Market Participant's attributable and non-attributable orders at a particular price

level, and disseminates order/quotation information into the aggregate montage and/or the current quote montage. (Appellant's specification page 8 line 28 to page 9 line 7.)

In FIG. 3B, the montage manager 26b determines 60 the price levels to display 60 and determines 61 if an order/quote is a non-attributable order. If non-attributable, the quote/order collector process 25 will store and sum 66 the order/quote with like priced orders/quotes to produce an aggregated order/quote and display 68 the aggregate size in the aggregate montage when the quotes/orders fall within one of, e.g., three top price levels. For attributable orders, the aggregate size of such orders is displayed in the current quote montage once the order(s) at a particular price level becomes the particular quoting market participant's best attributable bid or offer in the current quote montage. This interest will also be aggregated and included in the aggregate montage if it is within the displayed price levels. (Appellant's specification page 10 lines 5-24.)

Referring to FIGS. 5A-5B, the order execution/routing manager 26d is shown. The order execution/routing manager 26d will execute non-directed orders against Quoting Market Participant's quotes/orders based on price/time priority. The order execution/routing manager 26d will attempt to execute 76 against all displayed size (attributable and non-attributable) at a particular price level for market participants such as market makers and ECN's. Once displayed size in system 20 is exhausted, the order execution/routing manager 26d will attempt to access the quotes of UTP Exchanges. (Appellant's specification page 16 lines 1-30.)

FIG. 9 shows a composite montage 200 that is sent to participant workstations as a graphical user interface. The composite montage 200 includes the current quote montage 204 and aggregate montage 202. The aggregation montage 202 displays a predetermined number of price levels, e.g., the three best price levels 202a-202c on both the bid and ask side of the market. Each price level 202a-202c generally is dynamically updated and provides a display of the aggregate size of "displayed" trading interest ("attributable" and "non-attributable," as explained above) at each price level for both sides of the market e.g., 205, 207.

Both attributable and non-attributable orders are considered "displayable orders" since they are displayed to the system 20 and have the potential for being viewed by market participants. If a quote/order is "attributable," the price and size of the order will be displayed next to the Quoting Market Participant's MMID in the current quote montage (assuming this is

the Quoting Market Participant's best priced attributable quote/order), and will also be displayed in the aggregate montage as part of the aggregate trading interest when the price of the quote/order is within the best three price levels. (Appellant's specification page 26 line 12 to page 27 line 10.)

Alternatively, if a Quoting Market Participant designates an order/quote as "non-attributable," it will be displayed in the aggregate montage as part of the aggregate trading interest when the price of the quote/order is within the best three price levels, but will not be displayed in the current quote montage next to the Quoting Market Participant's MMID. (Appellant's specification page 27 lines 10-19.)

If a market maker were to place an order into a qualifying ECN, that order would not be displayed in system 20 until it was at the top of the ECN's file. In system 20, however, the market maker's order in the aggregate montage will be displayed when it is within the best three price levels on either side of the market. (Appellant's specification page 28 lines 5-14.)

The current quote montage 204 also includes a special MMID (here referred to as "SIZE") that represents the aggregate size of all non-attributable quotes/orders at the best bid/best offer displayed in the current quote montage 204 along with the other MMIDs for the Quoting Market Participants displaying attributable size at the inside. There is one "SIZE" MMID for the bid and offer side of the market. The aggregate size of the best bid/best offer displayed in the aggregate montage will equal the sum of the "SIZE" MMID displayed and the individual sizes of the MMIDs at the best bid/best offer displayed in the current quote montage. (Appellant's specification page 29 lines 11-25.)

The aggregate montage allows Quoting Market Participants to display size to the market anonymously, which minimizes certain risks that a market participant encounters when large size is attributable to its MMID. By allowing for the anonymous display of size to the market and by providing a facility that is SEC Order Handling Rule compliant, the aggregate montage will encourage Quoting Market Participants to show greater size, which will increase transparency in the market. (Appellant's specification page 30 lines 4-25.)

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Issues

The issues to be decided on appeal are:

1.   Did the Examiner properly reject claims 1, 4-6, 10, 16-17, and 24 under 35 U.S.C. 102(e), as being anticipated by Korhammer et al. U.S. Patent No. 6,278,982 (Korhammer)?

2.   Did the Examiner properly reject claims 2, 3, 7-9, 11, 14, 15, 18, 20, and 21 under 35 U.S.C. 103(a), as being obvious over Korhammer et al. in view of Gutterman et al. U.S. Patent No. 5,297,031 (Gutterman)?

3.   Did the Examiner properly reject claims 12, 13, 22, and 23 under 35 U.S.C. 103(a), as being obvious over Korhammer et al. in view of Gutterman et al. in view of Martyn et al. U.S. Patent No. 6, 195,647 (Martyn)?

Grouping of Claims

Claims 1-24 do not stand or fall together. Appellant's claims will be argued in separate groupings as defined below.

Group I has claims 1, 5, 6, and 9;

Group II has claims 2 and 3;

Group III is claim 4;

Group IV has claims 7 and 8;

Group V has claims 10, 11, 12, 14, and 24;

Group VI is claim 13;

Group VII is claim 15;

Group VIII has claim 16;

Group IX has claims 17, 18, 20 and 23; and

Group X has claims 19, 21, and 22.

Argument

1.   The Examiner has failed to establish a case of prima facie anticipation under 35 U.S.C. 102(e) of claims 1, 4-6, 10, 16-17, and 24 as being anticipated by Korhammer et al.

2.   The Examiner also failed to establish a case of prima facie obviousness under 35 U.S.C. 103(a) of claims 2, 3, 7-9, 11, 14, 15, 18, 20, and 21 as being obvious Korhammer et al. in view of Gutterman et al.

3.   The Examiner also failed to establish a case of prima facie obviousness under 35 U.S.C. 103(a) of claims 12, 13, 22, and 23 as being obvious Korhammer et al. in view of Gutterman et al. in view of Martyn et al.

Anticipation

"It is well settled that anticipation under 35 U.S.C. §102 requires the presence in a single reference of all of the elements of a claimed invention." *Ex parte Chopra*, 229 U.S.P.Q. 230, 231 (BPA&I 1985) and cases cited.

"Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim." *Connell v. Sears, Roebuck & Co.*, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983).

"This court has repeatedly stated that the defense of lack of novelty (i.e., 'anticipation') can only be established by a single prior art reference which discloses each and every element of the claimed invention." *Structural Rubber Prod. Co. v. Park Rubber Co.*, 223 U.S.P.Q. 1264, 1270 (Fed. Cir. 1984), citing five prior Federal Circuit decisions since 1983 including *Connell*.

In a later analogous case the Court of Appeals for the Federal Circuit again applied this rule in reversing a denial of a motion for judgment n.o.v. after a jury finding that claims were anticipated. *Jamesbury Corp. v. Litton Industrial Prod., Inc.*, 225 U.S.P.Q. 253 (Fed. Cir. 1985).

After quoting from *Connell*, "Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim," 225 U.S.P.Q. at 256, the court observed that the patentee accomplished a constant tight contact in a ball valve by a lip on the seal or ring which interferes with the placement of the ball. The lip protruded into the area where the ball will be placed and was thus deflected after the ball was assembled into the valve. Because of this constant pressure, the patented valve was described as providing a

particularly good seal when regulating a low pressure stream. The court quoted with approval

from a 1967 Court of Claims decision adopting the opinion of then Commissioner and later

Judge Donald E. Lane:

> [T]he term "engaging the ball" recited in claims 7
> and 8 means that the lip contacts the ball with sufficient
> force to provide a fluid tight seal **** The Saunders
> flange or lip only sealingly engages the ball 1 on the
> upstream side when the fluid pressure forces the lip against
> the ball and never sealingly engages the ball on the
> downstream side because there is no fluid pressure there to
> force the lip against the ball. The Saunders sealing ring
> provides a compression type of seal which depends upon
> the ball pressing into the material of the ring. *** The seal
> of Saunders depends primarily on the contact between the
> ball and the body of the sealing ring, and the flange or lip
> sealingly contacts the ball on the upstream side when the
> fluid pressure increases. 225 U.S.P.Q. at 258.

Relying on *Jamesbury*, the ITC said, "Anticipation requires looking at a reference, and

comparing the disclosure of the reference with the claims of the patent in suit. A claimed device

is anticipated if a single prior art reference discloses all the elements of the claimed invention as

arranged in the claim." *In re Certain Floppy Disk Drives and Components Thereof,* 227

U.S.P.Q. 982, 985 (U.S. ITC 1985).

Obviousness

"It is well established that the burden is on the PTO to establish a prima facie showing of

obviousness, *In re Fritsch*, 972 F.2d. 1260, 23 U.S.P.Q.2d 1780 (C.C.P.A., 1972)."

"It is well established that there must be some logical reason apparent from the evidence

or record to justify combination or modification of references. *In re Regal*, 526 F.2d 1399 188,

U.S.P.Q.2d 136 (C.C.P.A. 1975). In addition, even if all of the elements of claims are disclosed

in various prior art references, the claimed invention taken as a whole cannot be said to be

obvious without some reason given in the prior art why one of ordinary skill in the art would

have been prompted to combine the teachings of the references to arrive at the claimed invention.

Id. Even if the cited references show the various elements suggested by the Examiner in order to

support a conclusion that it would have been obvious to combine the cited references, the references must either expressly or impliedly suggest the claimed combination or the Examiner must present a convincing line of reasoning as to why one skilled in the art would have found the claimed invention obvious in light of the teachings of the references. *Ex Parte Clapp*, 227 U.S.P.Q.2d 972, 973 (Board. Pat. App. & Inf. 1985)."

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

> Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Laskowski*, 10 U.S.P.Q. 2d 1397, 1398 (Fed. Cir. 1989).

"The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984).

> Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984) (emphasis in original, footnotes omitted).

"The critical inquiry is whether 'there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.'" *Fromson v. Advance Offset Plate, Inc.*, 225 U.S.P.Q. 26, 31 (Fed. Cir. 1985).

Discussion

Appellant provides a display that includes an aggregate montage. The aggregate montage aggregates interest at a plurality of price levels for both sides of an electronic market. The aggregate montage allows users to see the depth of quotes in the market by easily viewing the aggregate interest at various price levels on each side of the market. Appellant accomplishes this through a graphical user interface that organizes and renders the aggregate montage. In one embodiment, the aggregate montage is displayed in proximity to a current quote window.

Appellant also provides a system that allows certain types of interest (e.g., non-attributable interest) to be hidden yet displayed to the market. Non-attributable interest is displayed in the aggregate montage as part of the aggregated quotes. This satisfies the regulations for displaying of an order, but also enables the identity, extent and indeed existence of the quote to be concealed. The appellant also provides a "special identifier" to identify aggregated non-attributable interest in the current quote window. The special identifier represents a total aggregate of non-attributable quotes at a particular price level.

<u>Group I (claims 1, 5, 6, and 9)</u>

Appellant's claim 1 is representative of this group. Claim 1 is directed to an electronic market system for trading of securities. Appellant's claimed electronic market system includes a plurality of client stations for entering quotes and a server process that receives quotes from the clients stations and aggregates the quotes. The server process of claim 1 also causes a total of all aggregated quotes to be displayed for each of a plurality of price levels on the client systems. Claim 1 is not anticipated by Korhammer.

The Examiner contends that Korhammer anticipated this claim and showed "a server process that aggregates the quotes and causes the aggregated quotes to be displayed for a plurality of price levels ... Totaling the quotes for each price level is inherent in the system and hence not explicitly illustrated in the reference." (Office action dated May 9, 2003)

FIGS. 4 and 5 of Korhammer depict market data screens. Korhammer neither describes nor suggests a process that "aggregates the quotes" and causes a "total of all aggregated quotes to be displayed for each of a plurality of price levels" as in the applicant's claim 1.

The examiner contends (on page 4, lines 2-5 of the final action) that Korhammer's "desired attributes" (Col. 4, line 36) include the total of all aggregated quotes and that totaling the quotes for each price level is inherent in the system and hence not explicitly illustrated in the reference." The examiner is incorrect for several reasons. For instance, Korhammer does not describe the aggregation of quotes for each price level nor is an aggregated value for each price level shown in any of the figures (e.g., FIGS. 4 and 5 related to the market data screens). In addition, the aggregation to which the examiner refers (Col. 4, lines 19-26) is an aggregation of information from various computer systems (i.e. collecting quotes from multiple ECNs) for display as individual quotes in a single window. Korhammer does not suggest producing a "total of all aggregated quotes to be displayed for each of a plurality of price levels" as in the applicant's claim 1. Based at least on these differences, claim 1 is not anticipated by Korhammer.

The examiner must give plain meanings to words used in Appellant's claim, specification and the prior art. The plain meaning of the limitation "total of all aggregated quotes to be displayed for each of a plurality of price levels" is not met by a reference that only teaches to display individual quotes. Korhammer is not an anticipating reference under 35 U.S.C. 102(e) since it does not contain every feature of the claimed invention.

Group II (claims 2 and 3)

Appellant's claim 2 depends on claim 1 and further limits claim 1. Claim 2 recites a current quote window to be displayed on the client systems in proximity to the aggregated quotes. Claim 2 is not anticipated by Korhammer or Gutterman whether taken alone or combined.

The Examiner argued in the final office action that Korhammer in view of Gutterman anticipated this claim. The examiner contends (on page 6, lines 7-8 of the final action) that: "Korhammer fails to explicitly teach the steps of a current quote window to be displayed in proximity to the aggregated quotes window of a graphical user interface." The examiner uses Gutterman, to teach a current quote window displayed in proximity to the aggregated quotes window. The examiner further contends (on page 6, lines 15-17 of the final action) that "the market pane is interpreted to include current quotes and the deck pane includes the aggregate

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quotes for each price level (See Gutterman Col. 11 lines 57-68 and Col. 12 lines 44-51)."

However, Gutterman does not teach a system in which "aggregated quotes at the plurality of price levels are rendered in an aggregate window of a graphical user interface displayed on the client systems" as in the applicant's claim 2.

Gutterman displays "the total number of orders at each price level" (Col. 10, lines 39-47). According to Gutterman, what is displayed is the total number of contracts at that price for incoming orders. There is no suggestion to combine these teachings since there has not been a showing that Korhammer would appreciate the benefit of aggregated quotes.

In addition, the total column in the incoming orders pane in Gutterman displays in the order line a total number of contracts at a price for all incoming orders based on the time of arrival. Thus, the total is displayed only for the orders (and price levels of the orders) displayed on the incoming orders screen and not for the orders in the queue. Since the total is displayed as a part of the information for a particular order in the order window, Gutterman does not include "a current quote window displayed in proximity to the aggregated quotes window" as claimed.

Furthermore, Gutterman does not discuss quotes. As shown in Fig. 2b, and as taught by Gutterman "it is advantageous to show buy orders in blue and sell orders in red and to outline the incoming orders pane in a different color" (Col. 11, lines 41-44). Since, Gutterman does not discuss or suggest the use of quotes, there is no suggestion to combine the order management system of Gutterman with the system of Korhammer.

Korhammer combined with Gutterman do not form a basis for an obviousness rejection of claim 2 under 35 U.S.C. 103(a) since at least the features of a current quote window displayed in proximity to the aggregated quotes window of a graphical user interface are neither described nor suggested by the combination of references.

Group III (claim 4)

Appellant's claim 4 depends on claim 1 and further limits claim 1. Claim 4 recites that the plurality of price levels are dynamically changeable depending on market conditions. Korhammer does not suggest this feature. The examiner considers these features to be taught at col. 8, lines 61-68 of Korhammer.

However, in the text relied on by the Examiner, Korhammer describes sorting what Korhammer characterizes as bids and offers by price and displaying the volume 265, four-character identification 266, and price 267. As seen in FIGS. 4 and 5, multiple bids and offers are displayed for each price level and the number and range of price levels is determined based on the bids received. Korhammer does not include a predetermined number of price levels that are dynamically changeable based on market conditions. Instead, the price levels displayed by Korhammer are based only on the number of bids and offers received and the size of the display. For example, the display shown in FIG. 4 includes 22 entries for the bid side of the market and 22 entries for the offer side. The bid entries are at 6 price levels whereas the ask side entries are at 4 price levels or a total of forty-four entries at ten price levels for both sides of the market. On the other hand, the display shown in FIG. 5 includes 22 entries for the bid side of the market and 22 entries for the ask side. The bid entries are at 8 price levels whereas the ask side is at 4 price levels for a total of forty-four entries at twelve price levels over both sides of the market.

However, if 22 quotes were received at the best bid price level, only one bid price level would be displayed in Korhammer while other quotes at different price levels would be hidden from the market. Similarly, if 22 ask bids were received at the best ask price only one ask price level would be displayed while other quotes at different price levels would be hidden from the market. Thus, the price levels displayed are determined by the number of received quotes at a price level. The number of price levels in Appellant's claim 4 is fixed at a plurality of levels and the prices at the plurality of levels "dynamically change depending on market conditions. Korhammer thus does not anticipate claim 4 because the number of quotes received at any particular price level as taught by Korhammer does not reflect a plurality of price levels that are dynamically changeable depending on market conditions, as recited in the appellant's claim 4.

Although the examiner does not rely on Gutterman in the rejection of claim 4, Gutterman also does not describe or suggest a system in which the plurality of price levels are dynamically changeable depending on market conditions. Gutterman includes a total column in the incoming orders pane (see FIG. 2A), however, this pane displays orders according to the time the orders are received. Thus, the displayed totals are determined not by the current market conditions but instead by the orders with the earliest timestamp that are displayed on the incoming orders pane. If the market conditions were to change, the totals would be displayed only after the orders

received in the queue prior to the change have been cleared from the incoming orders pane. Thus, whether taken alone or in combination with Gutternam, Korhammer does not make obvious the features of claim 4.

Group IV (claims 7 and 8)

Appellant's claim 7 is representative of this grouping. Claim 7 calls for an identifier that represents the aggregate size of all non-attributable quotes/orders at the best bid/best offer displayed in the current quote montage. This feature is not described in Korhammer or Gutterman. In the office action dated October 2, 2003 the examiner recites, "Korhammer fails to explicitly teach… the current quote window including an identifier of aggregate size of all non-attributable quotes/orders at the inside price…" The examiner relies on Gutternam to provide this feature, but does not provide a reference to where Gutterman teaches this feature and states that:

> the combined disclosure also suggests that by having the information about the aggregate size of the non-attributable quotes/orders at the inside market quote and information about the aggregated interest immediately at and around the inside market quote on the same screen investors have a better feel for the immediate demand and supply for a given security…

However, Korhammer neither describes nor suggests an identifier that represents the aggregate size of all non-attributable quotes/orders at the best bid/best offer displayed in the current quote montage.

In response to Appellant's amendment, the examiner stated in the final action that:

> the term "quotes" as used in Korhammer refers to the "genus" of which attributable and non-attributable quotes are species. In Korhammer's invention, a distinction of the various species of the same genus was not necessary and hence particular references to these quotes were not made in the invention. However, the terms attributable and non-attributable are inherent in the disclosure of Korhammer (page 14, lines 5-10 of the final action).

The examiner provides no basis for this comment. Korhammer provides no mechanism for non-attributable quotes. When a quote is displayed it is by definition attributable since Korhammer teaches that the displayed quotes are rendered in the window with the market participant identification. Thus, whether taken alone or in combination with Gutternam, Korhammer does not make obvious the features of claim 7.

Group V (claim 10, 11, 12, 14, and 24)

Appellant's claim 10 recites a graphical user interface that includes "an aggregate window having a first plurality of indicators that displays totals of aggregated interest." Claim 10 is not described or suggested in Korhammer. Again, as discussed above, Korhammer does not describe the aggregation of quotes for each price level nor is an aggregated value for each price level shown in any of the figures. Accordingly, Korhammer does not describe the features of claim 10.

Although the examiner does not rely on Gutterman in the rejection of claim 10, Gutterman does not describe or suggest "an aggregate window having a first plurality of indicators that displays totals of aggregated interest...at a third plurality of price levels" In Gutternam's FIG. 2A, a total is displayed in the incoming orders window for orders in the incoming orders pane sorted by arrival time. Gutterman states "because of the fixed size of the incoming orders pane 120, a touch sensitive scroll bar 122 is generated... the incoming order pane object also generates a queue portion 125... shown in the queue portion is the number of orders (zero is shown in the figure) that have been received by the workstation 10 but that are not displayed in the incoming orders pane 120 because of the pane's fixed size" (Col. 10, lines 46-57). Gutterman displays an order based on time of receipt, and if the number of orders received exceed the capacity of the window, a user would not see the depth of the market. For example, at a particular time if orders are included in the queue 125 at a better price, a user would not be able to view these orders until orders received prior to these orders are cleared from the incoming orders pane. In addition, the order total is displayed with other information on the order line and no suggestion is made to display the total in a separate aggregate window.

Group VI (claims 13)

Appellant's claim 13 further limits the current quote window and recites that the current quote window displays quotes that are attributable quotes of participants in the system and further comprises a special quote that represents total aggregate non-attributable quotes at a current market level included in an indicator in the aggregation window. The special quote that represents total aggregate non-attributable quotes at a current market level included in an indicator in the aggregation window is neither described nor suggested in any of the references.

Korhammer does not distinguish between attributable and non-attributable interest in the market. Korhammer does not deal with non-attributable quotes and does not make any provision for displaying non-attributable quotes. Thus, inherently Korhammer does not include in the displayed quote montage a special quote that represents total aggregate non-attributable quotes.

Were Korhammer to be modified to include non-attributable quotes, the only basis for display of non-attributable quotes would be in the same manner as attributable quotes (i.e. separately displaying each of the non-attributable quotes). Korhammer does not provide any basis for a special quote that represents total aggregate non-attributable quotes at a current market level.

In one embodiment, the special quote is the "SIZE" quote shown in Appellant's FIG. 9 and mentioned throughout the specification. There are no teachings in the references to provide such a special quote.

Group VII (claim 15)

Appellant's claim 15 depends on claim 14 and further limits claim 14. Claim 15 recites that the price levels are dynamically changeable depending on market conditions.

Korhammer does not suggest this feature. The examiner considers these features to be taught at col. 8, lines 61-68 of Korhammer. However, in the text relied on by the Examiner, Korhammer describes sorting what Korhammer characterizes as bids and offers by price and displaying the volume 265, four-character identification 266, and price 267. As seen in FIGS. 4 and 5, multiple bids and offers are displayed for each price level and the number and range of price levels is determined based on the number of bids received at a price level. Korhammer does not include a plurality of price levels that are dynamically changeable based on market

conditions. Instead, the price levels displayed by Korhammer are based only on the number of bids and offers received at a particular price level.

As described above for group III (claim 4), in Korhammer the price levels displayed are determined by the number of received quotes. However the number of quotes received at any particular price level would not lead one of ordinary skill in the art to provide a plurality of price levels that are dynamically changeable depending on market conditions. Similarly, in Gutterman the displayed totals are determined not by the current market conditions but instead by a set of orders with the earliest timestamp that are displayed on the incoming orders pane. Thus, whether taken alone or in combination with Gutternam, Korhammer does not make obvious price levels that are "dynamically changeable depending on market conditions" as in claim 15.

Group VIII (claim 16)

Appellant's claim 16 includes aggregating non-attributable interest in the product to provide a total of al non-attributable interest at a plurality of price levels.

On page 5 line 4 of the final action, the examiner contends, (referring to Korhammer) "the desired attributes are interpreted to include non-attributable interest in a product and totaling is inherent in the disclosure." Korhammer only describes attributable interest, and does not distinguish between attributable and non-attributable interest. Korhammer does not further suggest to aggregate the non-attributable interest and provide a total of all non-attributable interest. As discussed above, Korhammer does not deal with non-attributable interest in the market. Since Korhammer does not describe non-attributable interest Korhammer is not an anticipating reference for claim 16 under 35 U.S.C. 102(e).

It is not inherent that Korhammer includes non-attributable interest. However, if Korhammer were construed to inherently include non-attributable interest there is no basis to say that such non-attributable interest would be treated any differently than attributable interest is treated by Korhammer. That is, were Korhammer to be so construed, Korhammer would merely display each non-attributable order as an individual entry in the market data screen without the 4 four character identification as he teaches for attributable interest. Therefore, Korhammer is not an anticipating reference for claim 16 35 U.S.C. 102(e) since at least these features of the claims are not described in the reference.

Group IX (claims 17, 18, 20 and 23)

Appellant's claim 17 is representative of this grouping. Claim 17 calls for displaying the aggregated non-attributable interest in a window for at least one of the plurality of price levels. On page 5 line 4 of the final action, the examiner contends, (referring to Korhammer) "the desired attributes are interpreted to include non-attributable interest in a product and totaling is inherent in the disclosure." As discussed above, Korhammer does not deal with non-attributable interest. Since Korhammer does not deal with non-attributable interest even if Korhammer were to provide aggregate values, Korhammer would not suggest or teach displaying aggregated non-attributable interest. Korhammer is not an anticipating reference for claims 17 under 35 U.S.C. 102(e) since at least these features of the claims are not described in the reference.

Group X (claims 19, 21, and 22)

Appellant's claim 19 recites that the plurality of price levels are dynamically changeable depending on market conditions. Korhammer does not suggest this feature. The examiner considers these features to be taught at col. 8, lines 61-68 of Korhammer.

As described above for group III (claim 4), in Korhammer the price levels displayed are determined by the number of received quotes. However the number of quotes received at any particular price level would not lead one of ordinary skill in the art to provide a plurality of price levels that are dynamically changeable depending on market conditions. Similarly, in Gutterman the displayed totals are determined not by the current market conditions but instead by a set of orders with the earliest timestamp that are displayed on the incoming orders pane. Thus, whether taken alone or in combination with Gutterman, Korhammer does not make obvious price levels that are "dynamically changeable depending on market conditions" as in claim 19.

Applicant : Richard G. Ketchum et al.
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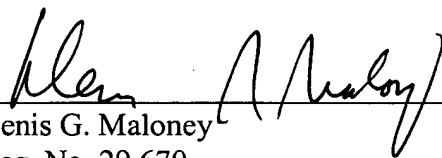Filed : September 23, 1999
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Conclusion

Appellant submits that claims 1-24 are allowable over Korhammer, Korhammer and

Gutterman, and Korhammer, Gutterman, and Martyn. Therefore, the Examiner erred in rejecting

Appellant's claims and should be reversed.

Respectfully submitted,

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Appendix of Claims

1.   An electronic market for trading of securities comprises:

a plurality of client stations for entering quotes for securities; and

a server process that receives quotes from the clients, aggregates the quotes and causes a total of all aggregated quotes to be displayed for each of a plurality of price levels on the client systems.

2.   The market of claim 1 wherein the server process further causes a current quote window to be displayed on the client systems in proximity to the aggregated quotes at the plurality of price levels.

3.   The system of claim 1 wherein the aggregated quotes at the plurality of price levels are rendered in an aggregate window of a graphical user interface displayed on the client systems.

4.   The system of claim 1 wherein the plurality of price levels are dynamically changeable depending on market conditions.

5.   The system of claim 1 wherein the aggregate window displays aggregate interest for both sides of a market.

6.   The system of claim 1 wherein the system further comprises:

a montage quote manager process to update the aggregate window.

7.   The system of claim 2 wherein the current quote montage further comprises an identifier that represents the aggregate size of all non-attributable quotes/orders at the best bid/best offer displayed in the current quote montage.

8.   The system of claim 7 wherein the identifier is displayed for both sides of the market.

9.   The system of claim 1 wherein three price levels of aggregated interest are displayed, with one being the price levels corresponding to the inside quote and the others being the next best price levels in the system for each side of the market.

10.   A graphical user interface for an electronic market for trading products comprises:
        an aggregate window having a first plurality of indicators that displays totals of aggregated interest of a second plurality of market participants that exists in the electronic market at each of a third plurality of price levels of a product traded in the market.

11.   The graphical user interface of claim 10 further comprising a current quote window disposed adjacent the aggregate window.

12.   The graphical user interface of claim 10 further comprising a current quote window disposed adjacent the aggregate interest window and wherein said current quote window displays quotes that may be negotiable quotes of participants in the system.

13.   The graphical user interface of claim 10 further comprising a current quote window disposed adjacent the aggregate interest window and wherein said current quote window displays quotes that are attributable quotes of participants in the system and further comprises a special quote that represents total aggregate non-attributable quotes at a current market level included in an indicator in the aggregation window.

14.   The graphical user interface of claim 10 wherein three price levels of aggregated interest are displayed, with one being the price levels corresponding to the inside quote and the others being the next best price levels in the system for each side of the market.

15.   The graphical user interface of claim 14 wherein the price levels are dynamically changeable depending on market conditions.

16.   A method of operating an electronic market for trading products comprises:

aggregating non-attributable interest in the product to provide a total of all non-attributable interest at a plurality of price levels.

17.   The method of claim 16 further comprising:

displaying the aggregated non-attributable interest in a window for at least one of the plurality of price levels of the product traded in the market.

18.   The method of claim 17 wherein displaying displays three price levels with one being the price levels corresponding to the inside quote and the others being the next best price levels in the system for each side of the market.

19.   The method of claim 17 wherein the price levels are dynamically changeable depending on market conditions.

20.   The method of claim 17 wherein displaying comprises:

producing a graphical user interface including an aggregate window that displays the aggregate quotes.

21.   The method of claim 17 wherein displaying further comprises:

producing a current quote window disposed adjacent the aggregate window.

22.   The method of claim 17 wherein displaying further comprises:

producing a current quote window disposed adjacent the aggregate window and wherein said current quote window displays quotes that may be negotiable quotes of participants in the system.

23.   The method of claim 17 wherein displaying further comprises:

producing a current quote window disposed adjacent an aggregate window and wherein said current quote window displays quotes that may be negotiable quotes of participants in the

system and further comprises a special quote that represents total aggregate quotes at a current market level displayed in the aggregate window.

24.   A computer program product for use in trading a product residing on a computer readable media comprising instructions for causing a computer to:

aggregate non-attributable interest in the product to provide a total of all non-attributable interest at a plurality of price levels.